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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/470,629 | 12/22/1999 | Andrew Geoffrey Tomlins | 476-1871 | 6386 |

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[REDACTED] EXAMINER

MEHRA, INDER P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2666 | 14 |

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | | |
|-----------------|------------------|--|
| Application No. | 09/470,629 | |
| Examiner | TOMLINS ET AL. | |
| Inder P Mehra | Art Unit 2666 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(e). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 December 1999.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 December 1999 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
- 4) Interview Summary (PTO-413) Paper No(s) _____ .
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recite the limitation "**that virtual circuit**" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recite the limitation "**the ATM cell boundary**" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recite the limitation "**the virtual circuit**" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recite "**AAL 0**" in line 2, which does not exist, according to ATM standards. This makes the claim indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 4-7 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Won (US Patent No. 6,510,163).

For claims 1 and 7, Won discloses a method of adaptation of a frame structure of time division multiplexed (TDM) channels into a group of complete ATM cells transmitted each TDM frame period (time slotted T1 signal, refer to col. 6 lines 27-28), refer to col. fig. 1 and col. 3 lines 49-65, wherein each byte of the TDM frame structure is mapped to a corresponding byte of an identifiable (routing tag and VPI /VCI, refer to col. 6 lines 34-36) cell of the group of the cells (sub-frame synchronization signal (mapping) for time slotted T1 channel (TDM)) , refer to col. 6 lines 5-24.

For claims 4 and 5, Won discloses AAL-1 (not AAL-0, which does not exist in ATM), abstract and col. 4 line 13-15; time slot group frame boundary coincides with the ATM cell boundary (sub frame synchronization signal and frame alignment, refer to col. 6 lines 18-24.

For claims 6 and 11, Won discloses ATM cells containing time slots from a synchronous frame which is given its own VCI and VPI, refer to col. 2 line 67 through col. 3 line3 and col. 4 lines 33-34.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Won as applied to claims 1 and 7 above, and further in view of Irvin (US Patent No. 5,862,136).

For claims 2 and 9, Won discloses all the subject matter of claimed invention with the exception of the following limitations:

- traffic is transported in frames *identified by corresponding pointers and labels* and asynchronous network in which the adapted traffic is transported in cells;
- comprising *mapping the synchronous frames into primary multiplexed groups*, mapping each said primary multiplexed group into traffic cells in a respective asynchronous virtual channel;
- *pointers and labels are mapped into one or more separate asynchronous cells for transport ahead of said traffic cells*;

Irvin discloses traffic transferred in frames *identified by corresponding pointers and labels* (distinct identifier, col. 13 line 16) *and* asynchronous network in which the adapted traffic is transported in cells, refer to col. 14 lines 30-35; comprising *mapping the synchronous frames into primary multiplexed groups*, mapping each said primary multiplexed group into traffic cells in a respective asynchronous virtual channel (maps the information received into cells, refer to col. 12 lines 62-65); and *pointers and labels are mapped into one or more separate asynchronous cells for transport ahead of said traffic cell* (an adaptation process by

which user generated information is written into and read from the fixed cell format. This is often referred to as being mapped to and from the fixed cell format, refer to col.3 lines 31-34) ;

Thus, it would have been obvious a person of ordinary skill in the art at the time of the invention to use distinct identifier, and the adaptation process of mapping pointers and labels into cells for onward transmission across ATM network. The suggestion/motivation to do so would have been to reconstruct or restore the frames in TDM format at the end of ATM network, refer to col. 13 lines 11-19.

For claim 8, Won discloses all the subject matter of claimed invention with the exception of the following limitations:

- *TDM card incorporating a multiplexer/mapper coupled with a set of framers to a first adaptation function coupled to one or more data transfer elements ;*
- *Second ATM adaptation function coupled to one or more data elements and a single back plane providing a coupling between first and second adaptation functions;*
- Irvin discloses *TDM card incorporating a multiplexer/mapper coupled with a set of framers to a first adaptation function coupled to one or more data transfer elements*, refer to col. 12 lines 60-67 ;
- *Second ATM adaptation function coupled to one or more data elements and a single back plane providing a coupling between first and second adaptation functions*, refer to col. 14 lines 40-45 ;

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Thus, it would have been obvious a person of ordinary skill in the art at the time of the invention to use multiplexing and mapping , and the adaptation process of mapping for onward transmission across ATM network. The suggestion/motivation to do so would have been to reconstruct or restore the frames in TDM format at the end of ATM network, refer to col. 13 lines 11-19.

For claims 3 and 10, Won discloses all the subject matter of claimed invention with the exception of the following limitations:

- *primary multiplexed groups are multiplexed groups are multiplexed by byte interleaving into a secondary multiplexed signal;*

Irvin discloses *primary multiplexed groups are multiplexed groups are multiplexed by byte interleaving into a secondary multiplexed signal*, refer to col. 1 line 35 and col. 10, lines 35-37;

Thus, it would have been obvious a person of ordinary skill in the art at the time of the invention to use multiplexing and interleaving, and the adaptation process of mapping for onward transmission across ATM network. The suggestion/motivation to do so would have been to interleave in transmit and receive frames in TDM format, refer to col. 1 lines 35-36.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Won as applied to claims 1 and 7 above, and further in view of Irvin (US Patent No. 5,862,136) and Eames (US Patent No. 6,282,189).

For claim 12, Won discloses all the subject matter of claimed invention with the

exception of the following limitations:

- provided in the form of an integrated circuit;

Eames discloses provided in the form of an integrated circuit (the mapping of TDM information into ATM cells---is performed in one or more ASIC integrated circuits), refer to col. 15 lines 23-25;

Thus, it would have been obvious a person of ordinary skill in the art at the time of the invention to use multiplexing and interleaving, and the adaptation process of mapping for onward transmission across ATM network in integrated circuits. The suggestion/motivation to do so would have been to facilitate interfacing with other modules in mapping functions.

Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Pasternak et al (US Patent 5,710,756) discloses Burst-error resistant ATM microwave link and network;
- Duault et al (US Patent No. 6,108,336) discloses AAL-5 SSCS for AAL-1 and AAL-2 ATM networks.

Conclusion

9. Any enquiry concerning this communication should be directed to Inder Mehra whose telephone number is (703) 305-1985. The examiner can be normally reached on Monday through Friday from 8:30AM to 5:00 PM.

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If attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Seema Rao , can be reached on (703) 308-5463. Any enquiry of a general nature of relating to the status of this application or processing should be directed to the group receptionist whose telephone number is (703) 305-4700.

10. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to (703) 872-9314.

Hand -delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, sixth floor (Receptionist).

Inder Mehra
Inder Mehra 3/14/03

March 13, 2003



DANG T. CN
PRIMARY EXAMINER